

### **REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-4 are currently pending in this application. No new matter has been added by way of the present amendment. For instance, Applicants have corrected some minor language in claim 1 and clarified the nature of the recessed portion as supported by claim 1 as filed as well as the present specification including the Figures.

In view of the amendments and remarks herein, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

### **Issues Under 35 U.S.C. 102(b)**

Claim 1 stands rejected under 35 U.S.C. 102(b) as anticipated by JP 2000-355766 to Fumihide et al. (hereinafter Fumihide '766). Applicants respectfully traverse.

The Examiner asserts that Fumihide '766 discloses a vapor phase growth apparatus comprising at least a sealable reactor, a wafer-containing member installed within the reactor and having a wafer mounting portion, a gas supply member, a heating member and a recess portion depressed in a dome shape and formed at a back side of the wafer containing member.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of anticipation. For anticipation under 35 U.S.C. §102, the reference must teach each and every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). To establish inherency, the

extrinsic evidence "must make clear that the missing descriptive matter is necessarily present". *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.*

Claim 1 is directed to a vapor phase growth apparatus comprising a sealable reactor, a wafer containing member having a wafer mounting portion, a gas supply member, a heating member and a heat uniformizing member.

In the present invention, a recess portion is formed at a back side of the wafer containing member, and the recess portion is formed so that an apex of the dome shape is arranged on a straight line connecting a center of the wafer containing member with a center of the heating uniformizing member (see claim 1).

As a result of the presently claimed structure, the temperature difference between the center of the wafer containing member and the peripheral portion of the wafer containing member is eliminated (for example, the issue of a temperature in the center being higher than that in the peripheral portion is eliminated). Therefore, the temperature of the whole wafer containing member is uniformized.

In contrast, Fumihide '766 fails to explicitly or implicitly disclose a vapor phase apparatus as presently claimed. Fumihide '766 discloses a vapor phase growth apparatus comprising a "quartz bell jar 3", gas inlets and outlets (4a, 4b), and an area which holds a wafer. Fumihide '766 discloses second susceptors (17), which contain one wafer respectively, and are provided in the recess portions (21) of the first susceptor (16) (see also Fig. 1 in Fumihide '766). On the back side of each second susceptor (17), a recess portion (32) is formed (see also Fig. 2).

However, Fumihide '766 does not explicitly or implicitly disclose that a recess portion (32) is formed at the back side of the second susceptor (17), so that the apex of the recess portion (32) is arranged on the straight line connecting the center of the second susceptor (17) with the center of the first susceptor (16).

Although the heat transfer from the first susceptor (16) to the second susceptor (17) is controlled, the temperature difference between the center of the first susceptor (16) and the peripheral portion of the first susceptor (16) is not considered.

Fumihide '766 fails to teach each and every aspect of the claimed invention, and thus, fails to anticipate the same. Accordingly, this rejection is improper.

Reconsideration and withdrawal of this rejection are thus respectfully requested.

**Issues Under 35 U.S.C. 103(a)**

**Fumihide '766 in view of Yoshiyuki '901**

Claims 2-4 stand rejected under 35 U.S.C. 103(a) as being obvious over Fumihide '766 in view of JP 06-124901 to Yoshiyuki et al. (hereinafter Yoshiyuki '901). Applicants respectfully traverse.

The Examiner acknowledges that Fumihide '766 fails to teach or suggest the claimed ratio of height and diameter H/D. The Examiner, however, relies on Yoshiyuki '901 to overcome the deficiencies of Fumihide '766.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d

488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness. *KSR Int'l Co. v Teleflex Inc.*

As noted above, Fumihide '766 fails to teach a vapor phase growth apparatus comprising a sealable reactor, a wafer containing member having a wafer mounting portion, a gas supply member, a heating member and a heat uniformizing member, wherein a recess portion is formed at a back side of the wafer containing member, and the recess portion is formed so that an apex of the dome shape is arranged on a straight line connecting a center of the wafer containing member with a center of the heating uniformizing member. Yoshiyuki '901 fails to cure these deficiencies.

Although Yoshiyuki '901 teaches an apparatus comprising a recess portion, Yoshiyuki '901 does not teach or suggest that the recess portion is formed at a back side of the wafer containing member so that an apex of the dome shape is arranged on a straight line connecting a center of the wafer containing member with a center of the heating uniformizing member.

Because the invention, as set forth in Applicants' claims, is not disclosed or made obvious by the cited prior art, reconsideration and withdrawal of this rejection are respectfully requested.

**WO '403 in view of Takemi '622**

Claim 1 stands rejected under 35 U.S.C. 103(a) as obvious over WO 2003/107403 (hereinafter WO '403) in view of Takemi et al. (U.S. 5,800,622) (hereinafter Takemi '622). Applicants respectfully traverse.

The Examiner asserts that WO '403 teaches a vapor phase apparatus comprising a sealable reactor, a wafer containing member, a gas supply member, a heating member, and a heat uniformizing member.

The Examiner acknowledges that WO '403 fails to disclose that a recess portion depressed in a dome shape is formed at a back side of the wafer containing member, and relies on the teachings of Takemi '622 to overcome this deficiency.

Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness. WO '403 discloses a vapor phase apparatus comprising a sealable reactor, a wafer containing member, a gas supply member, a heating member, and a heat uniformizing member. WO '403, however, fails to teach or suggest that a recess portion is formed at a back side of the wafer containing member so that an apex of the dome shape is arranged on a straight line connecting a center of the wafer containing member with a center of the heating uniformizing member. Takemi '622 fails to cure these deficiencies.

Takemi '622 discloses an apparatus comprising a semi-circular concavity provided on the backside of the wafer holder. However, Takemi '622 fails to teach or suggest that the recess

portion is formed at a back side of the wafer containing member so that an apex of the dome shape is arranged on a straight line connecting a center of the wafer containing member with a center of the heating uniformizing member.

Evidently, the cited references fail to render the present invention obvious. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

**WO '403 in view of Fumihide '766**

Claim 1 stands rejected under 35 U.S.C. 103(a) as obvious over WO '403 in view of Fumihide '766. Applicants respectfully traverse.

As discussed above, neither WO '403 nor Fumihide '766, alone or in combination, teach or suggest a vapor phase growth apparatus as presently claimed. Accordingly, this rejection is improper and should be withdrawn.

Reconsideration and withdrawal of this rejection are thus respectfully requested.

**Conclusion**


All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Marc S. Weiner, Reg. No. 32,181 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

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